Things to Know, Understand and Do
For Chapters 12, 13, and 14: Solution Chemistry

By the end of Chapters 12,13,and 14 you should

Know how to…
Define mixtures
Define solute, solvent, soluble, and dissociate
List and explain three factors that affect the rate of dissolving of solids in liquids
Define Solubility, Saturated, Unsaturated, and Supersaturated and know how to read a solubility curve
How to calculate molar concentrations
How to calculate the amount of solute needed to make a specific volume of a molar concentration
Read a phase diagram and vapor pressure curve
Define colligative property
Qualitatively explain the changes in freezing and boiling points of aqueous solutions

understand…
The 'like dissolves like' rule affects solubility
Pressure affects gas solubility (Henry's Law)
How a solubility curve is constructed and how temperature affects the solubility of gases and solids in aqueous solution
What Equilibrium Vapor Pressure is and how it responsible for boiling point for a liquid
Understand the difference between boiling and evaporation, and that melting and freezing points are the same thing
How solute can lower vapor pressure thus lower freezing point and elevate boiling point
How all the material in chapters 7, 8, 9, 10, and 11 can be dove-tailed together in this chapter

Things to Know, Understand and Do
For Chapters 12, 13, and 14: Solution Chemistry

By the end of Chapters 12,13,and 14 you should

Know how to…
Define mixtures
Define solute, solvent, soluble, and dissociate
List and explain three factors that affect the rate of dissolving of solids in liquids
Define Solubility, Saturated, Unsaturated, and Supersaturated and know how to read a solubility curve
How to calculate molar concentrations
How to calculate the amount of solute needed to make a specific volume of a molar concentration
Read a phase diagram and vapor pressure curve
Define colligative property
Qualitatively explain the changes in freezing and boiling points of aqueous solutions

understand…
The 'like dissolves like' rule affects solubility
Pressure affects gas solubility (Henry's Law)
How a solubility curve is constructed and how temperature affects the solubility of gases and solids in aqueous solution
What Equilibrium Vapor Pressure is and how it responsible for boiling point for a liquid
Understand the difference between boiling and evaporation, and that melting and freezing points are the same thing
How solute can lower vapor pressure thus lower freezing point and elevate boiling point
How all the material in chapters 7, 8, 9, 10, and 11 can be dove-tailed together in this chapter